The rejections of record will now be addressed in the sequence in which these rejections appear in the Office Action.

1. The rejection of claims 37-42, 45 and 67-68 under 35 U.S.C. 112 first paragraph, as based on a disclosure which is not enabling, is respectfully traversed.

The examples in the specification demonstrate how the person of ordinary skill in the art may obtain the articles defined by the claims. As an example relative to claim 37, there are various thicknesses set forth in the specification which result in a haze of less than 0.3% and thus there is more than one way to obtain the claimed property of claim 37. It is submitted that the scope of the present claims is enabled, to one of ordinary skill in the art, by the present disclosure.

2. The rejection of claims 25-51, 56 and 65 under 35 U.S.C. 112 second paragraph, as being indefinite, is respectfully traversed.

As discussed with the Examiner, the term "sub-layer" does not refer to the position of the layer in the stack.

3. The rejections of claims 32-33, 34, 43-44, 56-57 under 35 U.S.C. 112 second paragraph, as being indefinite, are respectfully traversed.

Claims 32, 34, 43, 56 and 57 have been amended for clarity; claims 33 and 44 depend from amended claims 32 and 43, respectively. Based on the clarifying amendments, reconsideration and withdrawal of the rejection is requested.

4. The rejection of claims 25-29, 31, 34-35, 43, 46, 52-56 and 61-65 under 35 U.S.C. 102(b) as being anticipated by USPN 5,595,825 to Guiselin, is respectfully traversed.

Guiselin relates to a coating stack comprising three films having infrared reflection properties (preferably silver), each of them being surrounded by dielectric material films.

Guiselin also discloses that "it is preferable to cover each of the infrared reflecting films .....with a fine metallic barrier film of a **metal** other than silver, such as nickel-chrome alloy, tantalum or titanium, particularly when the films of dielectric material are deposited by reactive cathodic sputtering in the presence of oxygen. These barrier films protect the underlying films, particularly metal films, from contact with **the** oxygen by partially oxidizing themselves". (col.4, l. 30-39). This refers to the well-known technique in the art of depositing a "sacrificial" metal layer over the silver layer. This "sacrificial" layer prevents direct contact between the silver layer and the reactive oxygen containing atmosphere in which an overlying dielectric layer is deposited. At least the top, exposed portion of the "sacrificial" metal layer is oxidised in place of the silver.

Guiselin further discloses that "it is also possible to deposit some or all of the films having infrared reflection properties onto a fine bonding film which improves the adhesion of the infrared reflecting film to the underlying dielectric material film. The bonding films are preferably of the same nature as the barrier films referred to above, i.e. they are made of a **metal** other than silver and may, for example, be based upon alloys of the nickel-chrome type or based upon tantalum or titanium" (col. 4, l. 40-48). Guiselin's bonding film is deposited as a metal and a metal silver layer is then deposited on top of the bonding film. Consequently, unlike the barrier film (which is deposited over the silver layer and which is oxidised in place of the silver layer by contact with the reactive oxygen containing atmosphere to which it is subsequently exposed) the bonding film (which is deposited underneath the silver layer) is not exposed to the reactive oxygen-containing atmosphere.

As Guiselin does not disclose, inter alia, "each" of the "non-absorbent transparent coating layers" having a layer "based on a partially but not totally oxidized combination of at

least two metals", (emphases added) present claim 25 is not anticipated by USPN 5,595,825 to Guiselin. As Guiselin does not disclose, inter alia, a glass substrate carrying a coating stack comprising (a) a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals, (b) a metallic coating layer .... (c) a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals (emphases and lettering (a), (b) and (c) supplied), present claim 52 is not anticipated by the Guiselin reference. Finally, as Guiselin does not disclose, inter alia, a glass substrate carrying a coating stack comprising (a) a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals, (b) a metallic coating layer .... (c) a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals . . . .(emphases and lettering (a), (b) and (c) supplied), present claim 61 is not anticipated by the Guiselin reference.

The other claims which were the subject of this rejection all depend, directly or indirectly, from one of the three independent claims 25, 52 and 61. Accordingly, those claims are also distinguished from Guiselin.

5. The rejection of claims 25-28, 31-35, 43, 46, 49-57 and 61-66 under 35 U.S.C. 102(b) as being anticipated by USPN 5,584,902 to Hartig, is respectfully traversed.

Hartig does not disclose, inter alia, partially but not totally oxidised nickel-chromium layers.

Hartig discloses the coating stack glass / Si_3N_4 / nickel or nichrome / silver / nickel or nichrome / Si_3N_4 (column 9, lines 13 to 18). Hartig explains that the nickel or nichrome layers are deposited in an **inert** atmosphere, preferably the same inert atmosphere which is

used to deposit the silver layer. The necessity for the atmosphere to be **"inert"** (i.e. non-reactive so as to result in the deposition of a layer in metallic form) for deposition of the nickel or nichrome layers of Hartig's invention is explicitly stated at column 9, line 65, at column 10, line 2 (referring to "This invention – see column 9, line 60) and in Claim 1. Hartig also discloses in claim 5 and when discussing "certain preferred embodiments" (Paragraph starting at column 10, line 16) that this **inert** atmosphere used to deposit the nickel or nichrome layers and the silver layer may be either a) substantially 100% argon or b) about 95% argon 5% oxygen.

It does not follow that the presence of 5% oxygen in an **inert** atmosphere used to deposit a nickel or nichrome layer leads to a partially oxidised coating layer. This point was elaborated upon in Applicants' response filed 14 November 2002. The Office Action, in the section identified as "Response to Arguments", includes a reference to the last paragraph at page 9 of the present application: this paragraph refers to the deposition of the metallic coating layer (which is generally silver or a silver alloy). This paragraph re-affirms Applicants' explanations that such small amounts of oxygen may be introduced for a better deposition of the metallic (generally silver) layer (which is nevertheless deposited as a metal).

In the paragraph beginning at column 8, line 65 Hartig mentions that the term nichrome is used in US5,584,902 to designate a layer "which includes some combination of nickel and chromium, at least some of which is in its metallic state, although same may be oxidised". The term "nichrome" is used by Hartig to refer both to the prior art and to his invention. If a metallic nichrome layer is used as a "sacrificial" barrier layer over a silver layer prior to deposition of an overlying oxide in a reactive oxygen containing atmosphere, it is highly likely that oxidation of the originally metallic nichrome layer will occur.

Nevertheless, the suggestion that the term "nichrome" can have a broad interpretation is in direct contradiction to the explicit teaching of Hartig that according to his invention the nichrome layers must be deposited in an "**inert**" atmosphere, which will result in metallic nichrome layers.

Based on the foregoing explanation, a reading of the complete disclosure of the Hartig reference, with the disclosure taken in context indicates that Hartig does not disclose, inter alia, a layer "based on a partially but not totally oxidised combination of at least two metals" (independent claim 25, emphasis added), and present claim 25 is not anticipated by USPN 5,584,902 to Hartig. The other independent claims rejected on this basis (claims 52 and 61) also includes the language of a layer of a "partially but not totally oxidized combination of at least two metals" (emphasis added) and is likewise not anticipated by the Hartig reference. The remaining claims identified in this rejection depend directly or indirectly from either claim 25, 52 or 61, and are thus not anticipated by the Hartig reference.

6. The rejections under 35 U.S.C. 103(a) are respectfully traversed.

Paragraphs 14 – 18 of the Office Action present rejections under 35 U.S.C. 103(a) and all those rejections were based on the premise that the Guiselin reference anticipated certain claims and that the Hartig reference anticipated certain claims. Since Applicants have demonstrated that there is no anticipation of those claims specifically rejected under 35 U.S.C. 102(b), it is submitted that the two references taken together neither anticipate to nor render obvious the invention of the various claims. To the extent that the Office Action bases a rejection on 35 U.S.C. 103(a) on the Guiselin reference alone or in combination with other prior art (paragraphs 14, 15, 16) or on the Hartig reference alone or in combaination with

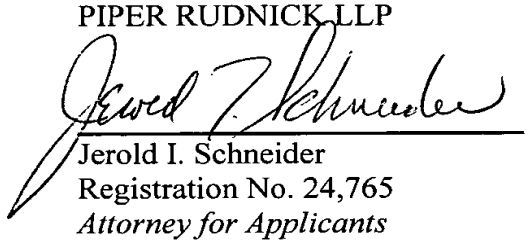
other prior art (paragraphs 17 and 18), these are respectfully traversed -- based upon Applicants' explanation of the Guiselin and Hartig references it is submitted that the reasoning supporting the rejections is no longer applicable.

CONCLUSION

Based on the foregoing, reconsideration, withdrawal of all objections, and allowance of all pending claims is respectfully requested. Should the Examiner be of the opinion that a further conference would expedite the prosecution of this application, the Examiner is encouraged to call Applicants' attorney at the following telephone number.

Respectfully submitted,

PIPER RUDNICK LLP



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MARKED UP COPY OF AMENDED CLAIMS

32. (amended) Transparent substrate carrying a coating stack in accordance with claim 25, characterized in that at least one of the two non-absorbent transparent dielectric coating layers comprises a sub-layer of at least one nitride.

34. (amended) Transparent substrate carrying a coating stack in accordance with claim 25, characterized in that the at least one metallic coating layer is selected from [silver, platnimu, palladium and combinations of these elements] the group consisting of silver, a combination of silver and platinum, a combination of silver and palladium, and a combination of silver, platinum and palladium.

43. (amended) Transparent substrate carrying a coating stack in accordance with claim 25, characterized in that the coating stack [contains two metallic coating layers separated by an intermediate dielectric coating layer] comprises, in order, the transparent substrate, a first non-absorbent transparent dielectric coating layer, a first metallic coating layer, an intermediate non-absorbent transparent dielectric coating layer, a second metallic coating layer and a third non-absorbent transparent dielectric coating layer.

56. (amended) Glass substrate carrying a coating stack in accordance with claim 52, in which at least one of the non-absorbent transparent coating layers [comprising a] comprises the layer of partially but not totally oxidized combination of at least two metals [is a sub-layer of

its non-absorbent transparent coating layer] in association with a layer of a different material to that of the layer of partially but not totally oxidized combination of at least two metals.

57. (amended) Glass substrate carrying a coating stack in accordance with claim 52, in which the entire thickness of at least one of the layers comprising a partially but not totally oxidized combination of at least two metals is partially oxidized [across its entire thickness].